



University of Central Florida

# THE IDEAL NOTECARD

How does it  
*speed* learning?



*First Year Advising and Exploration*  
*Student Success Center, Phillips Hall, 407-823-3789*  
*Unit of Academic Development and Retention ~ Division of Student Development and Enrollment Services*



# THE IDEAL NOTE CARD

Ideal notes will include many strategies successful in learning and remembering main ideas and important details. The Ideal notes have the following characteristics:

1. Easy to organize.
2. Quick to review so saves time.
3. Speeds, not impedes learning.
4. Contains source page numbers/lecture dates for main ideas & details.
5. Has multiple details in easier-to-remember numbered lists.
6. Contains visuals such as charts, sketches, & diagrams to aid recall.
7. Includes memory enhancing mnemonics.
8. Promotes the all-important self-testing.

One note organization format that meets all 8 of the above criteria is the Notecard Questions and Answer Technique (NQAT). Below are examples of ideal notecards for different college courses. Use these models to set-up notecards properly for self-testing.

# American National Government Classes

## Definitions

p. 79

**Federalism?**

**A philosophy - defines allocation of pow. betw. nat. govt. & states**

Listing of facts, characteristics, arguments, parts, steps, stages, phases, etc.

p. 79

**3 major arguments of federalists for federalism?**

1. Prevent tyranny
2. Use states as test grounds for new policies & progs
3. Provide for increased partic. in politics

**3 major arguments of federalists for federalism?**

Prevent tyranny

Use states as test grounds for new policies and progs.

Provide for increased partic. in politics.

**P U P arguments**

p. 176

**4 levels of protein structure & 1 characteristic of each?**

1. **Primary** – sequence of covalently joined amino acids in a polypeptide.
2. **Secondary** – result of hydrogen bonding of polypep. backbone to form ∇ helices & pleated sheets
3. **Tertiary** – overall shape or patterns of polypep. reinforced by interactions betw. side chains (R groups) of amino acids.
4. **Quaternary** – assoc. betw. or aggregation of 2 or more polypeps.

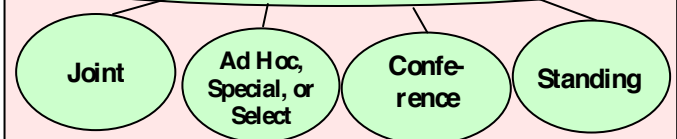
**Mary (loves) Dary & Tiary (loves) Nary**

p. 254

**4 types of congressional committees?**

1. **Joint**
  2. **Ad hoc, special, or select**
  3. **Conference**
  4. **Standing**
- J A C S Committees**

**4 types of congressional committees?**



## Biology Classes

p. 117

4 differences between prokaryotic and eukaryotic cells?

### Prokaryotic

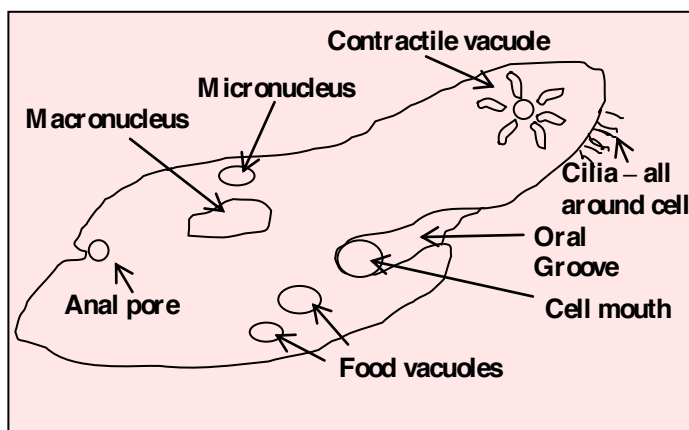
1. No nucleus
2. DNA in nucleoid
3. No membrane separates nucleoid from rest of cell
4. In bacteria only.

### Eukaryotic

1. Has nucleus
2. DNA in nucleus
3. Nucleus enclosed by membrane (envelope)
4. In plants & animals

p. 117

Draw a ciliophora and label the 8 parts



## Chemistry Classes

### Balancing Equations

2/15

What are the 6 steps for balancing equations?

Mnemonic - Can Do Intricate Balancing Reactions Very Effectively.

- Step 1. Copy down the equation.
- Step 2. Draw a table for reactants' ions & a table for product's ions. Use indiv. ions as column headings
- Step 3. Insert number of ions under their respective columns from each side of equa.
- Step 4. Balance the equa.
- Step 5. Rewrite the now balanced equa.
- Step 6. Verify your work by checking for = numbers of each ion on both sides of equa.
- Step 7. Evaluate that your ans. is correct.

Can Do Intricate Balancing Reactions Very Effectively.

## Front of a notecard

<p><b>List any prerequisites on this side such as formulas, equations, conversions, etc. that you must have in order to solve this problem.</b></p>	<p>p. 211</p> <hr style="border: 0.5px solid red;"/> <hr style="border: 0.5px solid cyan;"/> <hr style="border: 0.5px solid cyan;"/> <p style="text-align: center;"><b>Balance the following reaction:</b></p> <p style="text-align: center;"><b><math>\text{CaCl}_2 + \text{Na}_3\text{PO}_4 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + \text{NaCl}</math></b></p> <hr style="border: 0.5px solid cyan;"/> <hr style="border: 0.5px solid cyan;"/> <hr style="border: 0.5px solid cyan;"/>
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## Back of a notecard

<p>1. <math>\text{CaCl}_2 + \text{Na}_3\text{PO}_4 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + \text{NaCl}</math></p> <p>2. and 3</p> <table style="margin: 10px auto; border-collapse: collapse;"> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">Ca</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">Cl</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">Na</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">PO 4</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">Ca</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">PO<sub>4</sub></td> <td style="border: 1px solid black; padding: 5px; text-align: center;">Na</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">Cl</td> </tr> <tr> <td style="border: 1px solid black; padding: 5px; text-align: center;">3</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">6</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">6</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">2</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">3</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">2</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">6</td> <td style="border: 1px solid black; padding: 5px; text-align: center;">6</td> </tr> </table> <p>4. <math>3\text{CaCl}_2 + \text{Na}_3\text{PO}_4 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + \text{NaCl}</math></p> <p>5. <math>3\text{CaCl}_2 + \text{Na}_3\text{PO}_4 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + 6\text{NaCl}</math></p> <p>6. <math>3\text{CaCl}_2 + 2\text{Na}_3\text{PO}_4 \rightarrow \text{Ca}_3(\text{PO}_4)_2 + 6\text{NaCl}</math></p> <p>7. answer is on. p. 345.</p>	Ca	Cl	Na	PO 4	Ca	PO <sub>4</sub>	Na	Cl	3	6	6	2	3	2	6	6	<p>1. <u>C</u>opy equation.</p> <p>2 &amp; 3. <u>D</u>raw table for reactant's &amp; product's ions &amp; insert number of ions.</p> <p>4. <u>B</u>alance the equation.</p> <p>5. <u>R</u>ewrite the now balanced equation.</p> <p>6. <u>V</u>erify my work. Check for = #'s of each ion on both sides.</p> <p>7. <u>E</u>valuate that my answer is correct.</p>
Ca	Cl	Na	PO 4	Ca	PO <sub>4</sub>	Na	Cl										
3	6	6	2	3	2	6	6										

For math, physics, and chemistry it is a good idea to have problems and solutions set up on notecards so that you can self-test to identify what you have and have not learned before you take a real test. It is VERY wise to have a notecard for each variation on a problem that could occur on a test and then ***practice, practice, practice*** solving problems over and over to gain an understanding of the logic in solutions and to eliminate careless errors on exams.

## Stoichiometry:

### FRONT OF THE NOTECARD

4/15/00

What are the 11 steps for solving stoichiometry problems?

Mnemonic - I WIMPIE DAVE

### BACK OF THE NOTECARD

1. Identify type of stoich. prob.
2. Write bal. equa. from prob.
3. Indicate stoich. factors
4. Make a table
5. Put ? & givens in boxes
6. Insert molecular wts
7. Everything converted to moles
8. Do the stoichiometry.
9. Answer converted to proper quantity.
10. Verify answer is correct.
11. Evaluate how well you under. these steps

I WIMPIE DAVE

### FRONT OF THE NOTECARD

Source of problem - p. 342

How many grams of  $\text{H}_2\text{O}$  are produced when you start with 2 grams of  $\text{O}_2$  and 2 grams of  $\text{H}_2$ ?

Mnemonic - I WIMPIE DAVE

1. mole to mole
2.  $2\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$
3.  $2 == 1 == 2$   
 $\text{H}_2 + \text{O}_2 \rightarrow 2\text{H}_2\text{O}$

4. Table:

5.	moles	1	.0625	.125
6.	Grams	2	2	?
	MW	2	32	18
	grams	2	2	2.25

7. moles 1, .0625  
MW 2 32 18
8. moles .125
9. grams 2.25 = answer
10. Source of correct ans: txt. p. 455

1. Identify type of stoich. prob.
2. Write bal. equa. from prob.
3. Indicate stoich. factors

4. Make a table.
5. Put ? & givens in boxes
6. Insert molecular wts

7. Everything converted to moles
8. Do the stoichiometry.
9. Ans converted to proper quant.
10. Verify answer is correct.

### BACK OF THE NOTECARD

## Gas Law Problems:

### FRONT OF NOTECARD

What are 10 Steps for Solving Gas Law Problems?

Mnemonic - ROLAIDS AID

### BACK OF NOTECARD

- Step 1. Write the Ideal Gas Law
- Step 2. Organize table
- Step 3. Label & convert
- Step 4. Adjust formula (manipulate)
- Step 5. Immobilize the constants
- Step 6. Determine unknown
- Step 7. Substitute data & solve
- Step 8. Answer in units asked for
- Step 9. Insure answer's correct
- Step 10. Diagnose any mistakes

### FRONT OF THE NOTECARD

study guide p. 119

At constant pressure, a balloon of hydrogen gas initially at 25°C and 5.4L is cooled until its final volume is 2.1L. What is the final temperature in degrees Celsius?

Mnemonic - ROLAIDS AID gas problems

### BACK OF NOTECARD

1.  $PV=nRT$
2. Table
 

Initial	Final
$P =$	$P =$
$V = 5.4L$	$V = 2.1L$
$n =$	$n =$
$T = 25^\circ C$	$T = ?$
3. Convert 25°C to K.  $T = 298K$
4.  $\frac{PV}{nT} = \frac{PV}{nT}$
5.  $\frac{V}{T} = \frac{V}{T}$
6.  $T_f = (T_i, V_i) V_f$
7.  $T_f = 2.1L \left[ \frac{298K}{5.4L} \right]$  Result:  $T_f = 116K$
8.  $T_f = 273K - 116K = -157^\circ C$
9. Answer source = study guide p. 119

- Step 1. Write the Ideal Gas Law
- Step 2. Organize table

- Step 3. Label & convert
- Step 4. Adjust formula (manipulate)
- Step 5. Immobilize the constants

- Step 6. Determine unknown
- Step 7. Substitute data, solve

- Step 8. Answer in units asked for
- Step 9. Insure answer's correct
- Step 10. Diagnose any mistakes

## Mathematics Classes

### Front of a notecard

Prerequisites (here)

p. 233

XXXXXX

XXXXX

XXXX

Find inverse of  
 $f(x) = 2^x$

### Back of a notecard

$$f(x) = 2^x$$

1.  $y = 2^x$
2.  $x = 2^y$
3.  $Y = \log_2(x)$
4.  $f^{-1}(x) = \log_2(x)$

1. Replace  $f(x)$  with  $y$
2. Interchange  $x$  &  $y$
3. Solve for  $y$  by definition of log
4. Replace  $y$  with  $f^{-1}(x)$

Once notecards have been set up properly, a student may now self-test to discover what has been learned and what has not yet been learned when something can still be done about it.

To self-test and speed the learning of information on the notecards, follow the steps below:

**Step 1.** Read a question aloud from or look at a problem from the notecard.



**Step 2.** Then without looking, recite an answer aloud as if lecturing a class as best you can from memory. Those who have discovered that writing answers enhances learning and recall are encouraged to do so. If you have problems and solutions on notecards, write out a solution on scrap paper from memory after looking only at the problem.

**Step 3.** Turn the notecard over and check for completeness and accuracy of your answer or solution.

**Step 4.** If your answer was complete and accurate, place the notecard in the “I know this” pile and move on to the next notecard.

X marks the spot

**Step 5.** If your answer or solution was not complete and accurate, reread the answer aloud as many times as necessary until you “think” you have it. Then turn the card over and read the question aloud or view the problem, again. Recite aloud or write the answer again from memory and then turn the card over and check your answer. Keep repeating this step until you get the answer correct *from memory* and then place that notecard in the “I don’t know this, yet” pile. Then, move on to the next notecard.



**Step 6.** Review the “I don’t know this pile” once every 2 to 3 days to promote learning. Review the “I know this” pile every 3 days or so to check for learning and prevent forgetting.

As the number of times increases that you review and recite your notecards, more and more of the cards will transfer to the “I know this” pile and you will see progress in learning. When you use this technique properly, you discover what you have learned and what you have not yet learned before a test when you can still do something about it.

**Regularly Reciting Aloud  
Information To Be learned Is  
The Most Important Step  
In Preventing Forgetting**